



## Reconciliation of Expectancy-Valence and Expectation-Disconfirmation Paradigms in Investment Decisions: Case of Turkish Equity Investors

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### ABSTRACT

Human expectations are believed to play a key role in setting the direction of actual behavior. Although having its influence in a number of sectors and product types, the concept of expectations deserves special attention in the financial investment decisions, which is mostly up to the prospective beliefs about the major economic indicators and interrelationship among them. There exist numerous paradigms covering the concept with varying antecedents and consequences with a lacking coherence. Besides, the existing literature tends to take a finance-viewpoint in covering the investment decisions rather than a consumer behavior stance. The aim of this study is to demonstrate that the process of the first arousal of human need into the actual behavior might be analyzed in a coherent combination of Expectancy-Valence and Expectation-Disconfirmation Theories. The suggested approach is applied in the area of financial services, specifically in the determination of the motivational force to invest in the Turkey Equity Market by the Turkish investors. The findings indicate that the investors' motivational force is a function of the sum of expectations for the expected outcome and their valences. Their motivational force has an impact on their state of disconfirmation and its direction which, in turn influences their state of satisfaction. Past experience also emerges both as an outcome of the satisfaction process and as an antecedent of the motivational force for the following investment decision, in the periods covered.

**Keywords:** Disconfirmation, expectation, motivational force, satisfaction, Turkish equity market.

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### 1.0 INTRODUCTION

In the consumer behavior context, the expectations act as a bridge between the basic human need and the motivations which are the influential determinants of the behavior expected to occur in accordance

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with this need. Coming along with the destruction of the homeostatic balance<sup>2</sup> or the recognition of a deficiency, the need is an unlikeable feeling in essence, thus needs to be met in order for the individual, who is actually oriented towards satisfaction, to regain their state of homeostasis (Koç, 2013). However, the need is, most of the time not enough for the occurrence of the behavior by itself, thus needs to be triggered by the expectations towards the positive outcome of the subsequent behavior. Those needs fortified by the expectations turn into motivations.

Arising from one of the main issues studied in understanding human behavior in psychology (Grossack, 1953; Shapira, 1976; Millar and Tesser, 1988; Sims, 2000), the concept of expectations gains popularity in some other areas of social sciences, among the most popular of which are the consumer behavior (Fishbein and Ajzen, 1975; Kurtz and Clow, 1993; Rucker, Hu and Galinsky, 2014; Zhang, Fishbach and Dhar, 2007) and organizational disciplines (Vroom, 1976; Vroom and Yetton, 1973; Vroom and Jago, 1978; Lawler and Porter, 1968; Herriot and Ecob, 1979). Both the management domains tend to mention the expectations especially while addressing such issues as motivations, satisfaction, attitude formation, intention, decision making and actual purchase behavior in both product and service transactions. In the service context, expectations can be defined as the beliefs about future events which, when compared with perceived actual service delivered, are presumed to influence satisfaction and assessment of overall service quality (Coye, 2004). While covered in a number of fields, what is common to the approaches towards human expectations is the belief that they arise towards the occurrence of a given behavior or event, which gains either a predictive (will) or a normative (should) perspective for the customer.

Quite a number of paradigms are suggested to explain this intricately working mechanism from the arousal of the need towards its being motivated by the expectations in the behavioral sciences literature. One of them is the Expectancy-Valence Theory (Vroom, 1964), regarded to be an important source in the study of motivational forces in organizations. The theory hypothesizes that the force acting upon an individual to engage in an activity is a function of the sum of the products of the valences of all outcomes and the expectancies that the activity will lead to the attainment of these outcomes (Arnold, 1981). Vroom's assertions undergo some variations in terms of its antecedents and outcomes in later studies, some of which include the Vroom-Yetton Contingency Model of Leadership Behavior (Field, 1979; Brown and Finstuen, 1993), and Vroom-Jago Model (Field and Andrews, 1998; Stancu and Rece, 2010). Furthermore, the concept of expectations is reciprocated in the behavioral economics literature, as important influencer in the process of decision making under uncertainty. Evolving into the Prospect Theory as an alternative to the Expected Utility Model in the area, the new approach leads to questioning the 'homo-economicus' of the Neoclassical Economics (Aksoy and Şahin, 2009). Despite being extended in its scope, the basic postulate of the expectation paradigms, no matter in which context it is covered, remains unchanged; human expectations act as a bridge between the human need and the motivation process, consequence of which is the ultimate decision and the following actual behavior.

Following describing the position of expectations as a link between the human needs and motivations, it is also of importance to further the process into the stages of realization of the expected behavior or event, and (dis) confirmation on the way to the ultimate (dis) satisfaction. To achieve this purpose, Expectations-Disconfirmation Theory is suggested here, as widely used to study customer satisfaction, repeat purchase (or loyalty) and their antecedents (Bhattacharjee, 2001 as cited in Lin, Thai and Chiu, 2009). The theory extends the content of expectations holding that an individual's initial expectations determine the disconfirmation experience [negative disconfirmation, positive disconfirmation or confirmation], whose size and direction, in turn lead to satisfaction (Churchill and Surprenant, 1982; Thong, Hong and Tam, 2006).

<sup>2</sup> According to Claude Bernard, in order for the organisms to live, such elements as body temperature, oxygen, water and insulin rates in the blood have to be kept within certain standards without leading to mortality. The rates of these elements in the organisms are up to the changes in the environmental conditions. Homeostatic balance is the natural mechanism which ensures the continuation of the most convenient conditions for the living organisms. Any deterioration in this balance causes distress, creating the feeling of deficiency or need (Morgan, 1973 as cited in İslamoğlu and Altunışık, 2013).

The major axis of this discussion is the capital market with a special emphasis on the investment decisions in the Turkey Equity Market by the Turkish investors. The main reason for this preference is that the investment decisions are many-sided and complex, which makes them an ideal field to apply the intricate mechanism of expectation-and-satisfaction paradigms, besides being a relatively ignored area of study for the same purpose. Here, the investors' expectations are discussed as to be oriented towards the stock return, which has a close linkage with such macroeconomic indicators as Benchmark Interest Rate, Dollar and Euro Exchange Rates; while the satisfaction refers to the outcome to the extent that these expectations are met or not.

Within the Turkey equity market context, it is suggested that the motivational force behind the Turkish investors' investment decisions is the general expectations for an increase in the BIST 100, a main index of equity market under Istanbul Stock Exchange. This is, in turn a function of their expectations towards (1) a decrease in benchmark interest rate, (2) an increase in Dollar, (3) an increase in Euro exchange rates, and of their respective valences – *ceteris paribus*. In other words, under the light of the existing literature it is expected that the investors tend to invest their money in the equity market in the event that they expect the interest rates will be on a decrease, thus they will not be able to make such a good profit in the money market as bank deposits as in the capital market as equity purchases. These expectations for a decrease in benchmark interest rate should be accompanied by those for an increase in Dollar and Euro currencies, which are believed to have their reflections onto the equity market as good returns. This total motivational force, studied under these three macroeconomic indicators in this study is believed to lead to the state of (dis) confirmation depending on the investors' expectations being met or not met by the financial realizations at the end of the period covered. In the event that the investors' expectations are positively disconfirmed or confirmed, this will cause satisfaction. On the other hand, in the event that they are negatively disconfirmed, this will cause dissatisfaction. It is also asserted that the investors' previous knowledge or past experiences with the equity market as well as the cyclical state prevailing in the region will arise both as a consequence of their (dis) satisfaction state and as an influence of their following investment decisions.

Despite the fact that the concept of expectations together with the consequent behavioral stages are covered in a number of studies in the existing literature, most of them seem to have failed to introduce a connective approach among the paradigms suggested that far. This study is believed to fill in this research gap by taking an integrative approach, at least to some of these paradigms varying in scope but in fact having a lot in common. In this sense, it is suggested there might be reconciliation among the different expectation and satisfaction theories regarding their inputs and consequences, in one context. This integrative approach of the paper is not restricted to the paradigms suggested; it also takes an interdisciplinary stance between the consumer behavior and finance disciplines in that its theoretical background is mostly based on the former one while it has its application in the popular issue of the latter one – the equity market. This study is also believed to display an innovative character in that it accentuates the investment decisions part of the financial services within the mostly product-dominated consumer behavior context.

The study proceeds to a theoretical discussion of the concepts of expectations, disconfirmation, satisfaction and past experience together with the relationship between stock prices, interest rates and exchange rates are presented in the first section. The following section includes an application of the suggested paradigms in the equity-investment decisions by the Turkish investors, followed by the research method, discussion of the results obtained, the conclusion, theoretical and managerial implications.

## **2.0 THEORETICAL BACKGROUND AND HYPOTHESES**

### **2.01 EXPECTATION<sup>3</sup> AND MOTIVATIONAL FORCE**

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<sup>3</sup> The term of expectation tends to be used interchangeably with the expectancy in the consumer behavior literature.

Although the concept of expectation varies in definition according to the contextual frame it is used in, the common denominator among these definitions is its close link with the prediction about a future state of an action, which has something common with the predictor. Defined as a mental process or attitude in which certain ideas or images are regarded as substitutes for definite sensational contents which are to be experienced later, the expectations involve a complex mental activity, which may be intense and vivid, accompanied by strong emotion making the whole organism tense and alive with nervous activity; or it may arouse no feeling, remaining in consciousness only as a passive and almost ignored factor (Hitchcock, 1903). As for the principal conceptualizations of expectations, 'predictive expectations' (or *will* expectations) refer to the possibilities of the occurrence of future actions while 'normative expectations' (or *should* expectations) represent what customers ideally want, wish, expect or hope (Coye, 2004). The ultimate expectation is a function of these two forms of conceptualizations.

The expectancy paradigm is applied in a number of contexts including entrepreneurship (Renko, Kroeck and Bullough, 2012), health care (Walker and Thomas, 1982), banking (Stancu and Rece, 2010), caring and imagination (Hamington, 2010), strategic marketing (Smith, 2009) and stakeholder action (Hayibor, 2008). However, the model makes a name for itself especially in the organizational literature, some examples of which include work motivation (Pousa and Mathieu, 2010), performance (Ilgen, 1971; Sheridan, Slocum and Min 1975), occupational choice (Sheridan, Richards, Max and Slocum, 1973; Herriot and Ecob, 1979) and leadership decision making (Paul and Ebadi, 1989).

The early expectancy theories may be said to take its roots in the main doctrine of the Neoclassical Economy, which holds that the economic individual (*homo-economicus*) has endless needs as opposed to the limited resources, thus they take optimal decisions under certain limitations. According to this view, individuals who have rational expectations always try to maximize their benefits (Soydal, 2010). This view marks the emergence of Expected Utility Theory in the economics literature (Aksoy and Şahin, 2009). A similar approach as for the rationality of human expectations can be seen in the Expectancy-Valence Theory (EVT) in the organizational literature, which implies that the behavior of all individuals is rationally determined by the perceived likelihoods and desirability of outcomes associated with various behaviors (Vroom, 1964 as cited in Miller and Grush, 1988). As of the divergence of focus from the needs theories, such as that of Maslow's, Alderfer's, Herzberg's and McClelland's, into the motivation area, the components initiating the 'motivational force', which is the effort an individual puts into a task, gain importance. According to the Vroom's EVT, the force acting on an individual to work at a specific level of effort is a function of the algebraic sum of the products of; (a) the desirability of the outcomes (*valences*) of working at that level, and (b) the subjective probabilities (*expectancies*) that those outcomes will follow from working at that level (Behling and Starke, 1973). Ultimately the individual will choose to perform the activity [behavior] that has the strongest positive or weakest negative force (Arnold, 1981), which is very similar to the *homo-economicus* model of the Neoclassical Economy where people try to maximize their subjective expected utilities (Shapira, 1976).

In Vroom's terms (1964), valence is the affective orientation toward particular outcomes. These outcomes are positively valent if they are desired by the individual while those they wish to avoid is negatively valent, being scaled on a range from -1 to +1. Expectancy, on the other hand is defined as a momentary belief by the individual that their acting in a certain way will be followed by a given outcome. Its value ranges from .00 (no expectation for a particular outcome) to 1.00 (certain relationship between their action and a given outcome).

Vroom's formulation for this model is:

$$F_i = f_i \left[ \sum_{j=1}^m (E_{ij}V_j) \right] \quad (i = n + 1 \dots m)$$

$$f_i > 0; \quad i \prod_j = \phi \quad \phi \text{ is the null set}$$

where  $F_i$  = the motivational force to perform an act  $i$ ,  $E_{ij}$  = the strength of the expectancy that outcome  $j$  will follow from the act  $i$ , and  $V_j$  = the valence of outcome  $j$ . In an easier way, the motivational force to behave in a particular way is a function of the expectancy level of an outcome and the valence, or

weight or desirability of this outcome by the individual. It is important to note from this equation that the motivation is set to zero if any of these two components equals to 0, that is, no expectancy or no valence.

Besides these basic components in the formulation, Vroom's model includes two important propositions on the way to motivation. The first proposition holds that the individual assigns certain valence to the outcome of a behavior, which is called *first-order outcome*. The second proposition is that this assigned valence of a first-order outcome is determined by the value of other outcomes, called *second-order outcomes*, which the first-order outcomes can lead to (Shapira, 1976) or up to. In other words, these second-order outcomes act as an instrument for achieving the first-order outcome. Although Vroom's EVT is regarded to be descriptive rather than prescriptive in nature (Behling and Starke, 1973), this study attempts to apply its main premises in a financial investment context, specifically *the motivational force to invest in Turkey Equity Market by the Turkish investors*. As opposed to the studies in the behavioral finance literature emphasizing the impact of other factors such as emotions, environment and reference groups on the financial decisions (Tversky and Kahneman, 1973, 1974; Barber and Odean, 2000; Cohen, Gompers and Vuolteenaho, 2002; Hirshleifer, Myers, Myers and Teoh, 2001), this study suggests that the investment decisions are mostly of a rational nature rather than irrational. This approach goes parallel with the classical paradigm of financial theory asserting that investors make rational decisions, which are based on knowledge, expectations, and experiences in the capital markets (Fama, 1970; Cohen and Kudryavtsev, 2012). Having similar propositions with the Neoclassical Economy's rational economic agent who tries to maximize their benefits under the information they have access to, Vroom's EVT is considered to be appropriately applicable to this specific field of financial decisions.

Although this study argues for the rational decision making mechanism for the financial decisions, it also accentuates that classical notion of expectancy theories is later extended into different theories elaborating on the impact of factors other than rational ones. Its reflections on the economics area give rise to the emergence of Prospect Theory, which places human behavior on a more realistic ground by also taking the irrational forces affecting human decisions into account (Kahneman and Tversky, 1979). The theory is reciprocated by the Theory of Reasoned Action (TRA) in the management literature, which emphasizes the importance of environmental as well as the intrinsic forces in human decisions. The theory further hypothesizes that specific behavior can be predictable from specific behavioral intentions, which are, in turn a function of two components: (a) the attitude toward the act [intrinsic] and (b) the perceived normative expectations of reference groups, multiplied by the individual's motivation to comply with the expectations [environmental] (Ajzen and Fishbein, 1973). The formulation of the theory:

$$B \sim BI = [Aact]_{w_0} + [NB(Mc)]_{w_1}$$

where B = overt behavior; BI = behavioral intention; Aact = attitude toward the act; NB = normative belief; Mc = motivation to comply with the normative belief; and  $w_0$  and  $w_1$  are empirically determined weights.

Although differing in its understanding of normative belief, TRA stands in a close position to EVT in term of its evaluation of attitude or expectations, i.e. Aact. Symbolizing the individual's attitude toward performing the behavior in question under the given circumstances, thus being related to a specific behavior that is to be predicted, Aact is formulated as,

$$Aact = \sum_{i=1}^n B_i a_i$$

Where  $B_i$  refers to the individual's belief about the likelihood that the behavior in question will result in Outcome  $i$ ;  $a_i$  is the person's evaluation of (or attitude toward) Outcome  $i$ . This equation is similar to the expectancy formulation in EVT, which symbolizes the individual expectancy toward the occurrence of a



given behavior, weighted by its valence (EijVj). In other words, both the theories hold that an individual's expectation of, or attitude toward a specific act, is a function of the perceived consequences and their weighted values (valences) of that person. TRA, however presumes the impact of normative behavior on the way to anticipating the 'overt behavior', which is out of the EVT's primary objective of anticipating 'motivational force', rather than the behavior itself.

## 2.02 RELATIONSHIP AMONG STOCK PRICES, INTEREST RATES AND EXCHANGE RATES

The integration of the world financial markets (Francis, Hasan and Hunter, 2006), which gains special pace with the fast technological development, increases the possibility that any fracture in a financial market is directly or indirectly reflected in the others, especially those of the developing countries. Among the indicators on which this fracture has the deepest impact are the stock prices, interest rates and exchange rates, which are also the intensively studied areas in terms their collective effect on the financial markets. For the same reason, the volatilities in these indicators and their effects signal for an urgent need to investigate these variables collectively and in a wider perspective. It is argued in this study that any increase in the motivational force to invest in the Turkey Equity Market arises as a function of the expectancy for a decrease in the benchmark interest rate (a), which is the first-order outcome, and the expectancy for a concurrent increase in Dollar<sup>4</sup> and Euro exchanges (b), which are the second-order outcomes or instrumental effects in achieving the first-order outcome. These two conditions, a and b, are seen to be the primary factors affecting the expectancy for BIST 100<sup>5</sup> Index, which is studied as a motivational force to invest in the equity market in this study.

Firstly, regarding the relationship between the equity returns (stock prices) and interest rate, a number of studies suggest that the stock returns are negatively correlated with the changes in interest rates, and the relationship is two-tailed (Nissim and Penman, 2003; Fama and Schwert, 1977; Bjornland and Leitemo, 2009). In pursuit of the causal effect of this simultaneity, it can be argued that the interest rate has a direct effect on the demand for loans; high interest rates mean high cost of borrowing, hence firms invest less. If firms invest less, the value of their future cash flows declines, which has a direct negative effect on firm's stock prices (Iglesias and Haughton, 2013). In other words, any expected increase, in the interest rates - ceteris paribus - leads to a decrease in the equity returns (and vice versa) simply for the fact that the investors tend to put their money in bank deposits, which are considered to be safer than the equity indexes, open to fluctuations. It is noteworthy at this very point that these changes often take place on the perception level, which is manifested as 'expectations' in this study, before their numeric reflections into the financial market.

As opposed to the negative and two-tailed relationship between the stock prices and the interest rates, which gains wide acceptance in the finance literature, the relationship between the stock prices and exchange rates is somewhat controversial in that some researchers suggest a positive correlation (Aggarwal, 1981; Phylaktis and Ravazzolo, 2000; Wu, 2000; Doğan and Yalçın, 2007) while others advocate for a negative one (Soenen and Henniggar, 1988; Solnik, 1987; Kubo, 2012). Still some others hold that the relationship is two-tailed, thus making it impossible to deduce about one of them with reference to the other (Bahmani-Oskooee and Sohrabian, 1992; Fang and Miller, 2002; Obben and Shakur, 2006; Pekkaya and Bayramoğlu, 2008). (Ajayi and Mougoue, 1996), on the other hand assert that the relationship is negative in the short run, while being positive in the long run. Apart from these studies including the combinations of stock price-interest rate or stock price-exchange rate, there are also studies investigating the relation among these three variables. As an example for these, Yücel and Özmen (2010) find that stock prices, exchange rates and interest rates act in concert in the long term. Although differing viewpoints exist in the finance literature in terms of the link between stock prices

<sup>4</sup> Dollar refers to the US Dollar throughout the study.

<sup>5</sup> Borsa Istanbul 100 Index, BIST 100, is used as the main index for Equity Market under Istanbul Stock Exchange. It consists of 100 stocks selected among the stocks of companies traded on the National Market and the stocks of real estate investment trusts and venture capital investment trusts traded on the Collective Products Market. BIST 100 index automatically covers BIST 30 and BIST 50 stocks (<http://borsaistanbul.com/docs/default-source/endeksler/bist-stock-indices-ground-rules.pdf?sfvrsn=6>, accessed on 29/10/2014).

and exchange rates, this study holds the view that there is a positive correlation between the variables. In other words, any increase or appreciation in Dollar and Euro respectively (resulting from a decrease in the interest rates) will cause an increase in BIST 100 in a reasonable time. Overall, any increase in expectancy for BIST 100 Index, which is suggested as motivational force in this study, appears to a function of expectancy for a decrease in interest rates and for an increase in Dollar and Euro exchanges respectively - *ceteris paribus*.

**H1a:** Any increase in motivational force to invest in Turkey Equity Market is a function of the expectancy for a decrease in benchmark interest rate and for increases in Dollar and Euro exchange rates at the same time.

**H1b:** Any decrease in motivational force to invest in Turkey Equity Market is a function of the expectancy for an increase in benchmark interest rate and for decreases in Dollar and Euro exchange rates at the same time.

### 2.03 DISCONFIRMATION AND SATISFACTION

With a specific objective to describe the motivational force at the workplace, Vroom's EVT, much like many other expectancy theories, remarks that the subjective instrumentalities or rewards associated with the outcomes of a given behavior are not positioned at the core of this experience; rather the subjective perception of the *satisfaction* or *dissatisfaction* out of this intended behavior is of primary importance for the individual. Such propositions relating expectations and motivation to subsequent satisfaction are widely covered in the consumer behavior literature. A special emphasis at this point belongs to the researchers, Engel, Kollat, Blackwell, Howard and Sheth, Howard and Ostlund, who forwarded these propositions with regard to their functions in the decision making process in their respective models. The same approach essentially helps Vroom's base theory to be extended later by a number of independent studies as to include various antecedents and outcomes. As two of these outcomes, satisfaction and disconfirmation are researched within the purpose of this study.

Conceptually defined as an outcome of purchase and use resulting from the buyer's comparison of the rewards and costs of the purchase in relation to the anticipated consequences (Churchill and Surprenant, 1982), satisfaction occupies a central position in consumer behavior mainly due to its presumed impact on the post-purchase experience such as attitude change, repeat purchase, brand trust and even attitudinal or behavioral brand loyalty. It captures the post decision evaluation of a product or service (Oliver, 1980), which derives repeated choice and thus affect a company's long-term profitability (Newman and Werbel, 1973 as cited in Diehl and Poynor, 2010). In the numerous researches conducted as to the antecedents and outcomes of satisfaction, it is quite likely to detect some variant of the disconfirmation paradigm, which holds that satisfaction is related to the size and direction of the disconfirmation experience, where disconfirmation is related to the person's initial expectations (Churchill and Surprenant, 1982). This approach encompasses four constructs; expectations, performance, disconfirmation and satisfaction. Coined as the Expectation-Disconfirmation Theory<sup>6</sup> (EDT) in the literature, the model hypothesizes that the consumers construct some form of *expectation* about the outcome, or performance of a certain behavior, product or service; compare this expectation with the actual perceived *performance*; and then experience a positive or negative *disconfirmation* which, in turn has effects on *satisfaction* (Aurier and Guintcheva, 2014).

The first construct of the theory, i.e. expectations, is covered by Vroom's approach to the expectancy-valence model, thus being investigated in a wider context of motivational force in this study. The reason for this is the belief that the ultimate motivations, rather than sole expectations (without the impact of valence) have a direct effect on the disconfirmation and an indirect effect on satisfaction in

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<sup>6</sup> Expectation-Disconfirmation Theory tends to be used interchangeably with Expectation-Confirmation Theory in the consumer behavior literature. The first form of reference is adopted throughout this study, as believed to be more appropriate way of expressing the processes discussed, as well as to be consistent with Churchill and Surprenant's model (1982).

consumer decisions. The second construct is playing a role in the satisfaction process, i.e. performance, is used as to have the same meaning with 'realization', which is the numeric information reflected in the financial market. This also acts as a medium or measure for the individual in comparing their manipulated expectations with the actual happening or realization. The third construct, i.e. disconfirmation, refers to the psychological state experienced by the individual when there is a discrepancy between these two cases, that is, when their manipulated expectations do not match with the actual realization. Disconfirmation functions like this (Churchill and Surprenant, 1982, 492);

... An individual's expectations are; (1) confirmed when a product performs as expected, (2) negatively disconfirmed when the product performs more poorly than expected, and (3) positively disconfirmed when the product performs better than expected. Dissatisfaction results when a subject's expectations are negatively disconfirmed.

Within the scope of this study, the Turkish investors' motivational force to invest in the Turkey Equity Market - which is a function of the expectations for the benchmark interest rate, Dollar and Euro exchanges (Hypothesis 1) - has a direct effect on their disconfirmation about the expected outcome. This expected outcome, in turn is believed to be closely related to the realization of the motivational force (not expectations) in comparison to the numeric information acquired in the related period, namely any increase or decrease in BIST 100 Index.

**H<sub>2</sub>:** Realization figures in the Turkey Equity Market (BIST 100 Index) determine the disconfirmation state of the Turkish investors.

**H<sub>3</sub>:** The degree of realization in comparison to the Turkish investors' motivational force to invest in the Turkey Equity Market determines the direction of the disconfirmation.

Although there exist some researchers suggesting that the consumer expectations based on their previous experiences have a direct impact on their satisfaction (La Tour and Peat, 1980; Lin, Thai and Chiu, 2009), this is not the approach adopted in this study, which rather holds the view that the motivational force has an indirect effect on satisfaction through disconfirmation, in line with EDT. Accordingly, consumers (investors in this case) are expected to feel *satisfaction* when their motivational force to invest in the Turkey Equity Market is (a) positively disconfirmed, and (b) confirmed; while they are expected to feel *dissatisfaction* when their motivational force to invest in the Turkey Equity Market is negatively disconfirmed.

**H<sub>4</sub>:** The direction of the Turkish equity investors' disconfirmation has an effect on their state of satisfaction.

Extending this body of literature as to include more comprehensive models, (Oliver, 1980) further investigates some possible consequences of the process to find that attitude change and purchase intention are statistically proved to be influenced by satisfaction in that respective order. (Thong, Hong and Tam, 2006), on the other hand suggest that consumers develop the perceptions of usefulness, enjoyment and ease of use depending on the state of their expectations' matching, or not matching, with the usage outcomes of Information Technologies, IT, (disconfirmation). These post-purchase experiences (rather than pre-purchase), based on their direct experiences, have important direct effects on satisfaction, which, in turn determines their continued IT usage intention. The same study also finds some direct effects of these three sorts of perceptions on the continued IT usage intention (not through satisfaction) besides some other inter-effects among themselves.

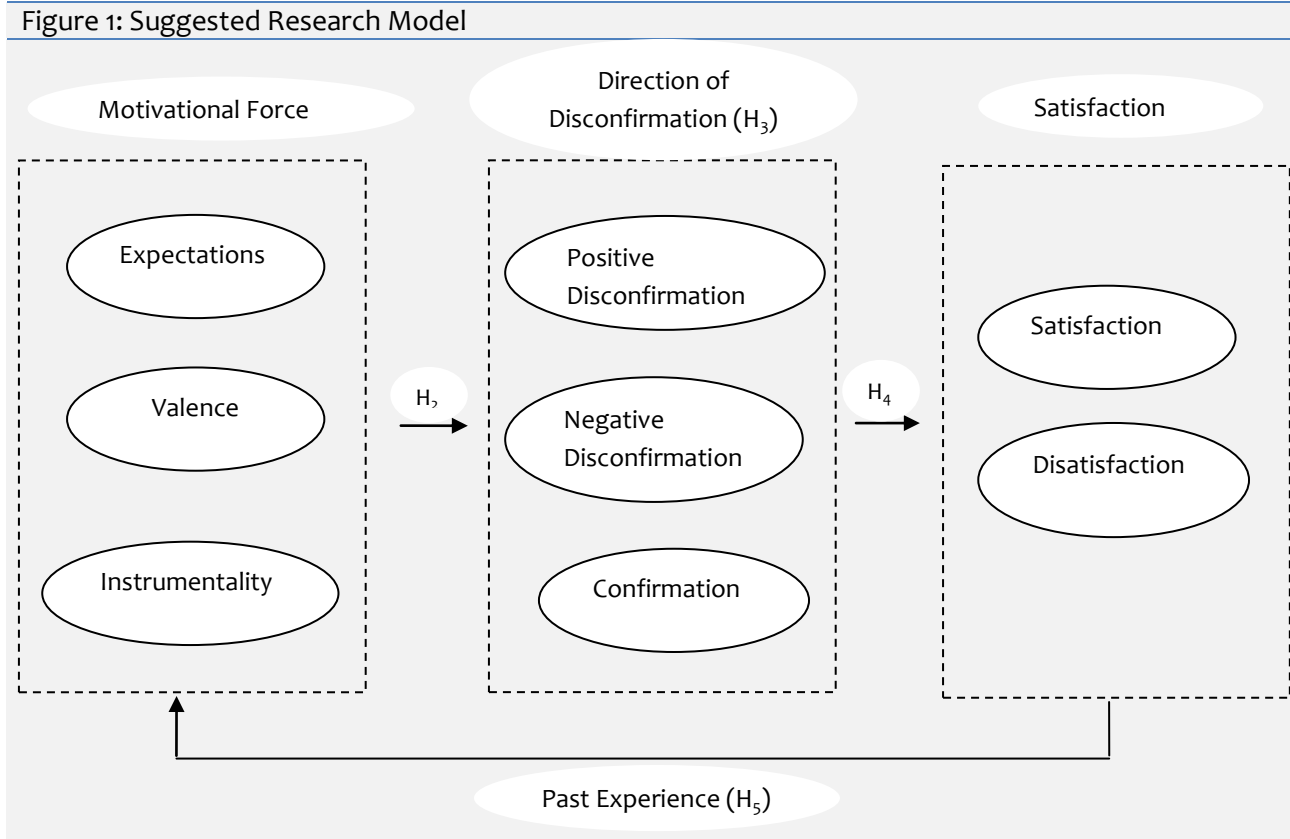
This study extends the outcome of the satisfaction state, which is *past experience* in this case, as to have a circling effect back onto the motivational force, holding the view that the state of satisfaction or dissatisfaction resulting from the disconfirmation process is of crucial importance in the creation of expectations in the form of past experiences (Fazio and Zanna, 1981; Karahanna et al., 1999; Bhattacharjee, 2001b as cited in Thong, Hong and Tam, 2006). The cognitive state of past experience,



appearing as a result of satisfaction, triggers a renewal of the motivational force, even for those who do not further the satisfaction process into an actual behavior - investment in this case - while that, appearing as a result of dissatisfaction makes a converse effect of the motivational force. Thus, the past experience in the equity market by the Turkish investors constitutes the cognitive antecedent of motivational force at the same time.

**H<sub>5</sub>:** Past experience has an important impact on the motivational force to invest in Turkey Equity Market in the following period.

Under the light of the propositions discussed in this study, the suggested research model is:



### 3.0 RESEARCH METHODOLOGY

#### 3.01 PROCEDURE AND SAMPLE

The data used for the application of the theoretical frame suggested in this study is taken from the Expectancy Survey on Capital Market published on a monthly basis since 2010 by the Capital Markets Board of Turkey (SPK), which operates under the Prime Ministry<sup>7</sup>. As is seen in the Executive Summary of the survey each, the aim of the Expectancy Survey on Capital Market is to monitor, and declare to the public, the perceptions and expectations of the executives of the (1) institutions that operate in the Turkey Capital Market and (2) companies whose equities are traded on Istanbul Stock Exchange (BIST), regarding the main macroeconomic indicators and the capital market. Any institution which has regulatory or administering power on the market is not included in the survey. Targeting to reach the whole population instead of the sample, the surveys are sent to 543 executives in 2010; 586 in 2011 613 in 2012, 2013 and 2014. The participation rate to the survey is 61% in 2010; 53% in 2011; 49% in 2012; 47% in 2013; 35% in 2014.

<sup>7</sup>The data can be reached in; <http://www.spk.gov.tr/apps/ad/AylikPeriyodikDokumanlar.aspx?pdt=PERD01&submenuheader=-1> (Accessed on 16/10/04)

The survey questions include the executives' expectations specifically on; Benchmark Interest Rate, Dollar and Euro Exchange Rate, Stock Price for BIST 100, Trading Volume for BIST Equity Market, Number of Companies to Go Public, Issue of Private Sector Debt Instruments, Rate of Foreign Investors, Foreign Debt of Real Sector, Number of Investors in BIST Equity Market, Trading Volume for BIST Precious Metals & Stones Market and Derivatives Exchange (ViOB), Net Size of Assets for Mutual Funds, Pension Funds and Securities Investment Associations. In accordance with the study goals, the first four variables, i.e., Benchmark Interest Rate, Dollar Exchange Rate, Euro Exchange Rate and Stock Price for BIST 100, are included in the research. The participants are asked to state their expectations for each variable on a 5 point scale ranging from *it will decrease considerably*, *it will decrease*, *it will remain unchanged*, *it will increase* and *it will increase considerably*.

The research period of the study is a 4 years' duration from 2010 to 2014, starting from the first declaration of the survey results to the public by the board. The participants' prospects are formed in a 1 month, 6 months and 1 year basis. That is, they are asked to create their expectations regarding the given economic indicators, in January each year for the following 1 month, 6 months and 1 year. The 1 year's expectations are used for 2010, 2011, 2012 and 2013 while the year of 2014 is evaluated within a 6 months' period, in comparison with a same period for 2013, in accordance with the timing of the study. The realization numbers obtained at the end of December are used for the 1 year's evaluations while those in June are used for the half-year's evaluations.

### 3.02 DATA ANALYSIS

This study is essentially designed as to focus its attention mainly on the qualitative rather than the quantitative attributes of the subject covered. In other words, its main emphasis lies heavily on the conceptual framework which is meant to be reinforced by the suggested application. Thus, the hypotheses presented have the characteristics of presumptions for the possible prospective outcomes; so do the analyzes.

## 4.0 RESULTS

The descriptive statistics for each of the 4 variables are presented below. In Table 1, the expectations reflect the whole year for 2010, 2011, 2012 and 2013, i.e. the period from the beginning of January to the end of December. The realization numbers for this group are obtained at the end of December each year.

Table 1: Descriptive Statistics for 2010, 2011, 2012 and 2013 (whole year)

	Benchmark Interest Rate		Dollar Exchange Rate		Euro Exchange Rate	
	Frequency	Percentage	Frequency	Percentage	Frequency	Percentage
2010 Expectancy (1 year)						
'it will decrease considerably'	3	0,91	0	0	0	0
'it will decrease'	27	8,16	49	14,8	52	15,71
'it will remain unchanged'	92	27,79	102	30,82	109	32,93
'it will increase'	202	61,03	175	52,87	162	48,94
'it will increase considerably'	7	2,11	5	1,51	8	2,42
TOTAL	331	100	331	100	331	100
2011 Expectancy (1 year)						
'it will decrease considerably'	0	0	0	0	3	0,97
'it will decrease'	47	15,21	62	20,06	77	24,92
'it will remain unchanged'	100	32,36	111	35,92	113	36,57
'it will increase'	159	51,46	134	43,37	115	37,22
'it will increase considerably'	3	0,97	2	0,65	1	0,32
TOTAL	309	100	309	100	309	100
2012 Expectancy (1 year)						
'it will decrease considerably'	3	0,98	2	0,65	4	1,31
'it will decrease'	96	31,37	85	27,78	113	36,93
'it will remain unchanged'	103	33,66	121	39,54	109	35,62

'it will increase'	102	33,33	94	30,72	78	25,49
'it will increase considerably'	2	0,65	4	1,31	2	0,65
TOTAL	306	100	306	100	306	100
2013 Expectancy (1 year)						
'it will decrease considerably'	1	0,35	1	0,35	2	0,69
'it will decrease'	56	19,44	33	11,46	43	14,93
'it will remain unchanged'	135	46,88	115	39,93	121	42,01
'it will increase'	93	32,29	137	47,57	121	42,01
'it will increase considerably'	3	1,04	2	0,69	1	0,35
TOTAL	288	100	288	100	288	100

In Table 2, the expectations are created for the first half of 2014, i.e. from the beginning of January to the end of June, in accordance with the timing of the research. In order to make a comparison, the numbers pertaining to the first half of 2012 and 2013 are also included in the list. The realization numbers for this second group are obtained at the end of June each year.

Table 2: Descriptive Statistics for 2013 and 2014 (half year)

2012 Expectancy for the first half	Benchmark Interest Rate		Dollar Exchange Rate		Euro Exchange Rate	
	Frequency	Percentage	Frequency	Percentage	Frequency	Percentage
'it will decrease considerably'	0	0	1	0,33	1	0,33
'it will decrease'	58	18,95	78	25,49	108	35,29
'it will remain unchanged'	116	37,91	115	37,58	120	39,22
'it will increase'	131	42,81	110	35,95	76	24,84
'it will increase considerably'	1	0,33	2	0,65	1	0,33
TOTAL	306	100	306	100	306	100
2013 Expectancy for the first half						
'it will decrease considerably'	0	0	1	0,35	1	0,35
'it will decrease'	66	22,92	36	12,5	44	15,28
'it will remain unchanged'	145	50,35	147	51,04	151	52,43
'it will increase'	77	26,74	103	35,76	92	31,94
'it will increase considerably'	0	0	1	0,35	0	0
TOTAL	288	100	288	100	288	100
2014 Expectancy for the first half						
'it will decrease considerably'	2	0,92	1	0,46	1	0,46
'it will decrease'	31	14,29	31	14,29	37	17,05
'it will remain unchanged'	55	25,35	72	33,18	69	31,8
'it will increase'	125	57,6	103	47,47	102	47
'it will increase considerably'	4	1,84	10	4,61	8	3,69
TOTAL	217	100	217	100	217	100

#### 4.01 RESULTS FOR MOTIVATIONAL FACTOR

Seeing parallel approaches among the Expectancy-Valence Theories, pioneered by Vroom and the extended Theory of Reasoned Action by Fishbein and Ajzen, this study suggests the formulation for the Motivational Force to Invest in the Turkey Equity Market as;

$$MF_i = f_i \left[ \sum_{j=1}^n (E_{ij}V_j) \right] = A_{act} = \sum_{i=1}^n B_{ia}i$$

In this formulation the percentages are included in the calculation as they are, since each has a certain degree of expectation, as opposed to Vroom's 'from .00 to +1 scale' where 0 signals no expectation and 1 signals a certain relationship. The valences for each variable, on the other hand is scaled from 1 to 5 according to their anticipated weights, where 1 signals the least weighted valence (undesired outcome), and 5 signals the most weighted valence (desired outcome). This approach is also different from Vroom's -1 to +1 scale where the middle 0 will nullify the effect of expectation of *it will remain unchanged* in a 5-point scale. However this level of expectation does have a meaning or rather a weight in our case. The valences for each expectation level are determined in accordance with the conceptual

framework where there is a negative correlation between BIST 100 and Benchmark Interest Rate while the correlation is positive between BIST 100 and Dollar-Euro Exchange Rates. Hence;

Table 3: Weighted Valences for Expectation Levels

	Benchmark Interest Rate	Dollar Exchange Rate	Euro Exchange Rate
'it will decrease considerably'	5	1	1
'it will decrease'	4	2	2
'it will remain unchanged'	3	3	3
'it will increase'	2	4	4
'it will increase considerably'	1	5	5

All in all, the Motivational Force to Invest in the Turkey Equity Market ( $MF_i$ ) for 2010, for instance, is calculated as;

$$MF_i = \sum_{j=1}^n [(Expectations \text{ for Benchmark Interest Rate} \cdot \text{Their Valences}) \\ + (Expectations \text{ for Dollar} \cdot \text{Their Valences}) \\ + (Expectations \text{ for Euro} \cdot \text{Their Valences})]$$

$$MF_i = [(0,91 \cdot 5) + (8,16 \cdot 4) + (27,79 \cdot 3) + (61,03 \cdot 2) + (2,11 \cdot 1)] + [(0 \cdot 1) + (14,8 \cdot 2) + (30,82 \cdot 3) + (52,87 \cdot 4) \\ + (1,51 \cdot 5)] + [(0 \cdot 1) + (15,71 \cdot 2) + (32,93 \cdot 3) + (48,94 \cdot 4) + (2,42 \cdot 5)] \\ = 923,89$$

Based on this equation, Motivational Factor (MF), together with the Realization Numbers (outcome), State of Disconfirmation, Satisfaction and the past experience for the periods covered are as follows;

Table 4: Results

	Benchmark Interest Rate	Dollar Exchange Rate	Euro Exchange Rate	Motivational Force <sup>8</sup>	Realization (BIST 100)	Direction of Disconfirmation	State of Satisfaction	Past Experience
2009	Non-applicable	Non-applicable	Non-applicable	Non-applicable	54,650.58 <sup>9</sup>	Non-applicable	Non-applicable	Non-applicable
2010	244,73	341,09	338,07	923,89	66,004.48	Non-applicable	Non-applicable	Non-applicable
2011	261,81	324,61	311	897,42	51,267.62	Confirmed Positively	Satisfaction	Non-applicable
2012	298,67	304,26	287,24	890,17	78,208.44	Disconfirmed Negatively	Satisfaction	Supported
2013	285,77	336,79	326,37	948,93	67,985.70	Disconfirmed	Dissatisfaction	Supported
2012, the first half	275,48	311,1	289,58	876,16	62,543.49	Non-applicable	Non-applicable	Non-applicable
2013, the first half	296,21	323,26	315,96	935,43	76,294.51	Confirmed Positively	Satisfaction	Supported
2014, the first half	254,85	341,51	336,41	932,77	78,489.01	Disconfirmed	Satisfaction	Supported

In comparison with 2010, the expectations for an increase in benchmark interest rate in 2011 (from 244 to 261) concur with the expectations for a decrease in Dollar exchange rate (from 341 to 324) and in Euro exchange rate (from 338 to 311). This combination of effects leads to a consequent decrease in the

<sup>8</sup>The figures for motivational force are calculated according to the suggested model, and set a standard just for making a comparison with those of the previous and following years. In the event of any change in the valences, these figures will also change, however the rates in between will remain the same.

<sup>9</sup>The realization number in 2009 is presented to make a comparison with the following year possible. The expectancy rates pertaining to this period do not exist, thus it is not possible to make any inference about the disconfirmation or satisfaction states for the following year, 2010.



total motivational force (from 923 to 897). This result is accordant with the suggested theoretical framework. The same rule also applies for 2012 when the participants create their expectations for an increase in benchmark interest rate (from 261 to 298) and concurrent decrease in Dollar (from 324 to 304) and in Euro (from 311 to 287), which causes a decrease in the motivational force from 897 to 890. In 2013, the expectations for a decrease in benchmark interest rate (from 298 to 285) together with the expectations for an increase in Dollar (from 304 to 336) and in Euro (287 to 326) reflect the motivational force as an increase (from 890 to 948). Hence,  $H_{1a}$  and  $H_{1b}$  are supported for the periods researched.

In comparing the first half of 2013, the figures pertaining to the first half of 2012 are taken into consideration in order to reach a standard for the periods. Although the expectations for the benchmark interest rate are for an increase (from 275 to 296), which coincides with the expectations for an increase in Dollar (from 311 to 323) and Euro (from 289 to 315), the motivational force increases as opposed to the presumptions (from 876 to 935) in the first half 2013. Instead of refuting the suggested hypothesis, this case is rather thought to derive from the substantial increase in the BIST 100 Index in 2012, reaching a peak within the periods covered and ensuring good returns for the investors. This optimistic mood is considered to prevail through the first half of 2013 when the investors are highly motivated for investing in the Turkey Equity Market, although the interest rate is on a rise. However, this optimistic mood gave way to disappointment in 2013 when BIST 100 Index drops off considerably, giving rise to a serious loss of wealth for the investors this time. This pessimistic atmosphere negatively reflects on the motivational force in the first half of 2014 as expected, when the investors' motivational force cannot pull itself together (decrease from 935 to 932) although the expectations for the interest rate are for a decrease (from 296 to 254) and those for Dollar (from 323 to 341) and Euro (from 315 to 336) are for an increase. This negative effect of the previous year is further aggravated by the political disputes in the region swaying in Russia and Ukraine, Syria, Iraq and many other Middle Eastern countries for months. Thus, it is important to note that the investment decisions are open to the impact of many factors and/or their combinations in a complex system.  $H_1$  and  $H_2$  cannot be assessed for this period since the other macroeconomic factors seem to be dominating the investment decisions.

#### 4.02 RESULTS FOR DISCONFIRMATION

The volatilities experienced in the successive periods are thought to determine the direction of the disconfirmation for the investors. The realization figures for BIST 100 Index constitute the outcome of this study. Accordingly, in 2011 the decrease in investors' expectations (or rather motivational force, MF) in comparison with those in 2010 (from 923 to 847) is met with a decrease in BIST 100 Index (from 66,004 to 51,267). Since the outcome performs as expected, it can be inferred that the Turkish Investors are *confirmed*. In 2012, it seems that the Turkish investors seem to be conservative in their expectations, thus MF decreases (from 897 to 890) although the realizations for BIST 100 reaches a peak for the period covered (from 51,276 to 78,208). Since the outcome performed better than expected, the Turkish investors are presumed to be *positively disconfirmed*. However state of disconfirmation does not go on in 2013 when a substantial rise in MF (from 890 to 948) - a positive effect of the previous year - is reciprocated with a serious decrease in BIST 100 (from 78,208 to 67,985). Since the outcome performed poorly than expected, the Turkish investors can be said to be *negatively disconfirmed*.

When it comes to the first half of 2013, again the investors seem to be *confirmed* by the increase in their MF (from 876 to 935) is met with a rise in BIST 100 (from 62,543 to 76,294). MF figures are on a decrease (from 935 to 932) in the first half of 2014 when the Middle East Region experienced serious political turmoil, which reflects onto the financial markets. Thus, being sober in their investment decisions, the Turkish investors opt for decreasing their MF. However, the expected does not occur, and BIST 100 Index closes with a rise (from 76,294 to 78,489). Thus, the investors are presumed to be *positively confirmed* in the first half of the year. Hence;  $H_2$  and  $H_3$  are supported.

#### 4.03 RESULTS FOR SATISFACTION

According to the literature, the disconfirmation levels, in turn are presumed to be influencing on the satisfaction or dissatisfaction states of the participants. The investors are presumed to feel *satisfaction* when they feel confirmed and positively disconfirmed; and to feel *dissatisfaction* when they feel negatively disconfirmed. Accordingly, they felt satisfaction in 2011, 2012, in the first half of 2013 and 2014 while they feel satisfaction in 2013. Hence;  $H_4$  is supported.

#### 4.04 RESULTS FOR PAST EXPERIENCE

It is suggested in the conceptual framework that the investors' cognitive states or rather experiences in a certain period have a determining effect on their decisions for the following period. Accordingly, in 2011 when the decrease in their motivational force (from 338 to 311) is confirmed by a decrease in BIST 100 (from 923 to 897), the investors keep decreasing their MF for 2012 (from 897 to 890). However, they are positively disconfirmed when there is an unexpected increase in BIST 100 in 2012; thus, their MF sharply increases (from 890 to 948) in 2013.

The comparisons for the first half of 2013 and 2014 are made according to the figures recorded at the end of the previous years since it is thought that the past experience has an impact on the following period, but the impact is open to decrease if the period is interrupted by a second half year. Those investors positively disconfirmed in 2012, increase their MF (from 890 to 935) in the first half of 2013. However, when they are negatively disconfirmed in 2013 as a result of the decrease in BIST 100, their MF figures seem to be diminishing (from 948 to 932) in the first half of 2014. The political instability in the region is also thought to be influential in this case. Hence;  $H_5$  is supported.

## 5.0 DISCUSSION AND CONCLUSION

Expectations are widely studied in many disciplines, some of which include psychology, consumer behavior, marketing, finance and economics. Thought to be furthering the process from the first arousal of the need into the actual behavior, expectations, or expectancy interchangeably, are the main constituent in the motivation theories. As one of the most influential examples, Vroom's Expectancy-Valence Theory, dating back to 1964 holds that the power directing the individual towards a certain activity or behavior is a function of the sum of the expectations of an expected outcome and their valence, or rather their weight for the individual. The theory is considered to stand on a same ground with the Expected Utility Model, its counterpart in the Neoclassical Economics, in that both emphasize the rationality in human decisions instead of the possibility of other irrational impacts. Having positive as well as negative criticism by various researchers in time, the concept of expectations under these rationality paradigms open the way towards the development of Prospect Theory in Neoclassical Economics, which positions human behavior on a more realistic base paying attention to the irrational forces affecting decisions, as opposed to the homo-economicus model. The expectancy model is, on the other hand further developed by the Theory of Reasoned Action in the Management literature, which attaches importance to the impact of environmental as well as intrinsic factors on the human decisions. Defined as attitude towards the act, these intrinsic forces are thought to have similarities with the expectations weighted by their valences, or rather a motivational force in Vroom's paradigm.

Developing the expectancy paradigm into such outcomes as disconfirmation and satisfaction, Expectation-Disconfirmation Theory hypothesizes that consumers construct a form of *expectations* for a certain outcome or performance of a behavior; compare this with the actual perceived performance (realization); and then go into a state of *disconfirmation*, which, in turn have an impact on their state of *satisfaction*. To put it differently, the need enforced or motivated by the expectations leads the individual through the stages of disconfirmation on the way to the ultimate satisfaction.

This study suggests that there might be reconciliation among the theories discussed in terms of the antecedents and outcomes that they offer. The research model is developed in the context of a combination of Expectancy-Valence and Expectation-Disconfirmation paradigms where the output of the former one constitutes the input of the latter one. The effect of *past experience* is also added to the

model in the belief that it emerges not only as an outcome of this combination of paradigms but as an antecedent of it as well.

The suggested model is tested conceptually to the extent of the investment decisions in the Turkey Equity Market by the Turkish investors. The reason for this choice is the belief that the investment decisions, being complex in nature can ideally be applicable to this intricate mechanism of expectancy and satisfaction paradigms. It is further thought that the investment decisions are rather an ignored area in the consumer behavior literature although the investors are also the service-consumers similar to the product-consumers.

Based on the Expectancy Survey on Capital Market published on a monthly basis since 2010 by the Capital Markets Board of Turkey, the research covers a period from 2010 to 2014. The empirical findings reveal that the Turkish investors' motivational force to invest in the Turkey Equity Market is a function of their expectations for such macroeconomic indicators as benchmark interest rate, Dollar and Euro exchange rates, and their valences according to their degree of importance. Compared with the actual realizations (BIST 100 Index) in the related period, this motivational force leads to different stages of disconfirmation for the investors. If the outcome performs as expected, they feel confirmed; if better than expected, they feel positively disconfirmed; and if poorly than expected, they feel negatively disconfirmed. These states of disconfirmation, in turn have an impact on their state of satisfaction. They feel satisfied when experiencing the confirmation or positive confirmation; while they feel dissatisfied when experiencing negative disconfirmation. These states of satisfaction constitute past experience for the investors (outcome), who adjust their motivational force based on this past experience (antecedent) for their following investment decisions. It is also proposed that the political and economic outlook of the geographical region in a wider perspective influence their motivational force for their following investment decisions.

## **6.0 THEORETICAL AND MANAGERIAL IMPLICATIONS**

This study theoretically contributes to the existing literature in that it brings an integrative approach to the differing expectation and satisfaction paradigms in the behavioral sciences. The motivational force, which is an outcome of the expectancy-valence theories, is suggested as an antecedent of the satisfaction-disconfirmation theories. The research model also positions the past experience as an outcome of the reconciliation among the paradigms while not ignoring the cyclical state of the region surrounding Turkey in analyzing the investment decisions. This study also exemplifies an interdisciplinary model of the finance and behavioral sciences. With its major emphasis on the consumer behavior, it applies the suggested model in the capital market, specifically the equity market, rather an ignored combination of areas in the literature. This approach is believed to open the way towards further collaboration between the marketing discipline and financial services area in general, as well as new attempts as to cover the different disciplines such as economics-marketing, finance-behavioral sciences, psychology-marketing, psychology-economics and the like.

Regarding the managerial implications, this study is believed to help to popularize the idea that the investors should be thought and behaved as the ultimate consumers of the financial services provided, their differing needs should be taken into account, their expectations should be well analyzed and their satisfaction should be of utmost importance for the successful continuation of the financial system. In today's highly competitive business practices, the stock exchanges throughout the world tend to incorporate, namely being commercial companies, for which the profit issue has a primary role, rather than the governmental organizations whose main target is the public welfare. This means that the stock exchanges and the markets under them are faced with fierce competition with their rivals within the country in question and those crossing their national borders. In this transforming environment, the results of this study will be of interest to the authorities in fine-tuning their strategies according to the changing conditions and their effects on the human behavior.

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